

AUTOTHERME Cr-Mo 1 (MOD)

CODIFICATION: **AWS :** SFA 5.28 ER80S-B2

CHARACTERISTICS AND APPLICATIONS:

Autotherme Cr-Mo 1 (MOD) is a copper-coated solid wire for GMAW available in bright finish, gives smooth flow, stable arc and spatter free under optimum welding conditions. This wire having lesser impurities i.e. S, P, will improve the subzero impact property. It gives radiographic quality welds. It is suitable for welding 1.25Cr - 0.5Mo steel. The weld metal possesses good high temperature properties. It deposits notch free weld deposit with excellent mechanical properties. Especially suitable for welding of pipes & tubes of matching composition in Power plants, Refineries, Petrochemicals, Fertilizer plants, etc. Suitable for welding of ASTM steels: Grade F2, F11, F12 class 1 & 2 of SA-182, Grade T11 of SA-199, Grade T2, T11 & T12 of SA-213, Grade WC6 of SA-217, Grade P2, P11 & P12 of SA-335, Grade FP2, FP11 & FP12 of SA-369, Grade 2, 11 & 12 of SA-387, Grade CP2, CP11 & CP12 of SA-426, etc.

TYPICAL CHEMICAL COMPOSITION OF SOLID WIRE:

Element	C	Mn	Si	S	P	Cr	Mo	Cu	Sn	As	Sb
%	0.08	0.50	0.45	0.007	0.009	1.30	0.50	0.05	0.003	0.003	0.002

X-factor: $(10P + 5Sb + 4Sn + As) / 100 \leq 12$ ppm (elements in ppm)

J-factor: $(Mn+Si) \times (P+Sn) 10^4 \leq 120$

TYPICAL MECHANICAL PROPERTIES OF ALL WELD METAL:

(PWHT: 620⁰C FOR 1 HR)

UTS (MPa)	YS (MPa)	Elongation (L=4d) %	CVN Impact Strength At minus 20°C (Joules)
620	550	24	80

WELDING PARAMETER: DC(+)

Diameter	Flat	
	Volt, V	Current, A
1.2 mm	27-32	300-360
1.6 mm	25-30	340-420

SHIELDING GAS: Argon/ 1-5% O₂

WELDING POSITION: H, F, VU, OH

PACKING :

STANDARD SIZE	1.2 mm & 1.6 mm.
QUANTITY	15.0 kg wire, layer wound in a plastic spool that conforms to DIN-8559 SD-300.